

# FUNGI (MICROMYCETES)

COLLECTED IN ARCTIC NORTH AMERICA

(KING WILLIAM LAND, KING POINT AND HERSCHELL ISL.)

BY THE GJÖA EXPEDITION

UNDER CAPTAIN ROALD AMUNDSEN

1904—1906

DETERMINED BY

**J. LIND**

WITH ONE PLATE

(VIDENSKABS-SELSKABETS SKRIFTER. I. MATH.-NATURV. KLASSE. 1909. No. 9)

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UDGIVET FOR FRIDTJOF NANSENS FOND

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CHRISTIANIA

IN COMMISSION BY JACOB DYBWAD

1910

Fremlagt i Fællesmødet 12te November 1909 ved N. Wille.

## INTRODUCTION.

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On account of the collecting of plants during the Gjõa-expedition not being made by a botanist, no regards were taken to the fungi; and those named here are consequently only such, as quite accidentally were living upon the collected Phanerogames. The small Pyrenomycetes therefore are much more represented than the more conspicuous fungi as the Uredineae and Exobasidieae which surely are to be found.

It is my opinion, that a statement of the countries — where the same fungi have formerly been found — would be useful; it shows, that most of the fungi, found by the expedition, have a circumpolar distribution, many of them are also found in the Alps.

My account is close to Dr. OSTENFELD'S account of the Phanerogames from the Gjõa-expedition, so I have left out the names of the author and other details, which are to be found there.

The Botanical Museum at Copenhagen,  
October 10th, 1909.

J. Lind.





List of Fungi from King William Land in the vicinity  
of Gjöa Harbour Lat. N. 68° 37' 38", Long. W. 96° 23' 40".

*Ustilagineae.*

*Entyloma ambiens* (KARST.) JOHANS. (85). Syn.: *Ustilago ambiens* K. (72), *Entyloma crastophilum* Sacc. VII, pag. 491, *Thecaphora Dactylidis* Pass. (F. von W. 77). Sacc. VII, pag. 496. Icon: JOHANSON (85).

Sp. 12—24  $\mu$  diam.

On leaves of *Dupontia Fisheri* (hosp. nov.).  $10/8$  1904.

Area: Spitsb., Su. (Umeå), N., Isl.

*Ustilago violacea* (PERS.) GRAY. Sacc. VII, pag. 474.

Sp. 6—8  $\mu$  diam; echinulatis.

On *Melandrium apetalum* f. *arctica*.  $2/8$  1905.

Area: N. (Tromsø), Fær., Isl., Grønland, Am. b., etc.

*Uredineae.*

*Puccinia Oxyriae* FÜCK. Sacc. VII, pag. 642. Sydow 04, pag. 567.

On living leaves of *Oxyria digyna*.  $6/8$  1904.

Area: Su. (Quickjock, SCHROET. 81), N. (Hardanger), Fær., Isl. besides Germ., Helv., Tir., and Colorado.

*Pyrenomycetes.*

*Carlia rhytismoides* (BAB.) KUNTZE. Syn.: *Hypospila rhyt.* Niessl. Sacc. I, pag. 424.

Asc. 50  $\mu \times$  14  $\mu$ . Sp. 14—16  $\mu \times$  7  $\mu$ .

On dead leaves of *Dryas integrifolia*. July 1904.

Area: Sib., Su., N., Spitsb., Fær., Isl., Gr., Labrador besides Germ., It., Brit.

*Mycosphaerella pachyasca* (ROSTRUP) VGR. (oo). Syn.: *Sphaerella* pach. ROSTR. (88). *Sphaer. nivalis* FÜCK. (72) non OUDS. (85). *Didymosphaeria nivalis* (FÜCK.) BERL. & VOGL. Sacc. IX, pag. 613. Icon: FÜCK. (72).

The perithecia, which I have measured, varied from 120 to 160  $\mu$  in diameter. The length of asci was 40—50—54—76—80  $\mu$  and width 12—18—22—23—24  $\mu$ . The size of the spores varied too, the length was 16—20—24—28  $\mu$  and the width from 4 to 7  $\mu$ . Nevertheless I do not doubt, it is the same species in every case. A characteristic for the species is the thick wall of the asci and the extraordinary clear and colourless spores. This latter characteristic is the more notable, as in this regions the spores of the most part of the *Pyrenomycetes* are very dark coloured.

On dead leaves and stems of *Alsine verna* f. *rubella* July 04, *Astragalus alpinus*  $\frac{5}{8}$  05, *Chrysanthemum integrifolium*  $\frac{2}{8}$  05, *Cochlearia officinalis* var. *groenlandica*  $\frac{6}{8}$  04, *Epilobium latifolium*  $\frac{3}{8}$  05, *Eutrema Edwardsii*  $\frac{2}{8}$  05, *Papaver radicum* f. *albiflora*  $\frac{1}{8}$  05, *Parrya arctica*  $\frac{17}{7}$  04 &  $\frac{4}{8}$  05. *Pedicularis sudetica* var. *lanata* Juli 04, *Saxifraga cernua*  $\frac{3}{8}$  04, *Saxifr. hirculus* var. *propinqua*  $\frac{1}{8}$  04, *Saxifr. rivularis*  $\frac{3}{8}$  05, *Stellaria longipes* f. *humilis*  $\frac{7}{8}$  05 and *Taraxacum hyperboreum* July 04.

Area: N. (Dovre & Tromsø), Su., Spitsb., Isl., Gr., Els., Al.

*Mycosphaerella Polygonum* (CRIÈ) LIND. Sacc. I, p. 512.

Peritheciis subcutaneis, atris, in foliis gregariis vel sparsis, in caulibus in series elongatas dispositis. Perit. 200  $\mu$  diam., asc. 50—70  $\mu$   $\times$  16—20  $\mu$ , sp. 17—20  $\mu$   $\times$  6  $\mu$ , 1 sept.

On dead leaves and stems of *Oxyria digyna*  $\frac{6}{8}$  04.

Area: Isl., Gr., Els. besides Gall.

*Mycosphaerella Tassiana* (DE NOT.) JOHANS. (85). Syn.: *Sphaeria arctica* FÜCK. (72), *Didymella arctica* (FÜCK.) BERL. & VOGL. Sacc. I, pag. 530. Icon: DE NOT. (63). Tab. XCVIII, Fück. (72). Tab. I, fig. 6, OUDS. (85). Tab. I, fig. 2.

Perith. 200  $\mu$  diam. Asc. 40—44—47—52  $\mu$   $\times$  16—18—19—22—23  $\mu$ , Sp. 14—20—22  $\mu$   $\times$  4,8—6  $\mu$ . I do not see the necessity of separating this species from *Mycosphaerella pachyasca*.

On dead leaves and stems of *Alopecurus alpinus*  $\frac{4}{8}$  05, *Carex incurva* & *misandra*  $\frac{7}{8}$  05, *Car. salina* var. *subspathacea*  $\frac{6}{8}$  04, *Eriophorum Scheuchzii*  $\frac{6}{8}$  04, *Glyceria maritima* f. *reptans*  $\frac{1}{8}$  05 &  $\frac{6}{8}$  04, *Glyc. Vahlia*  $\frac{31}{7}$  04, *Poa cenisia*  $\frac{3}{8}$  04 (look fig. 2).

Area: Nov. Seml., Finl., Su., N., Spitsb., Fær., Isl., Grøn., Labrador besides Germ., Tir., It.



*Mycosphaerella Wichuriana* (SCHROET. 1881) JOHANS. (85). Sacc. I, pag. 530.

Perith. 60—75  $\mu$  diam., asc. 25—36  $\mu \times$  14—18  $\mu$ , sp. 13—16  $\mu \times$  3  $\mu$ .

On withering leaves of *Carex membranopacta* & *misandra*  $\frac{7}{8}$  05, *C. rupestris* Aug. 05, *C. salina* var. *subspathacea*  $\frac{10}{8}$  04, *Dupontia Fisheri*  $\frac{6}{8}$  04, *Festuca ovina* subsp. *brevifolia*  $\frac{5}{8}$  05.

Area: N. (Tromsø, SCHROET. 88. Dovre, BLYTT 91), Su. (SCHROET. 81), Fær., Isl., Gr., Els., Al.

*Didymella hyperborea* (KARST.). Sacc. I, pag. 551. Syn.: *Sphaeria hyperborea* K. (72).

Asci cylindraceis 80—100  $\mu \times$  9  $\mu$ . Sporidiis monostichis, sub-rhomboides, medio septatis, hyalinis, 16—18  $\mu \times$  7—8  $\mu$  (look tab. I, figs. 7 and 11).

On leaves of *Cassiope tetragona*  $\frac{31}{7}$  04.

Area: N., Spitsb. (Th. M. FRIES legit  $\frac{1}{8}$  1868), Gr., Labrador (SCHROET. 88).

*Venturia chlorospora* (CES.) KARST. Sacc. I, pag. 586.

Asci 48—52  $\mu \times$  14  $\mu$ ; sporidiis 18  $\mu \times$  6—7  $\mu$ , 1 septatis, primo chlorino-hyalinis demum rubro-fuscis.

On dead leaves of *Salix arctica* var. *Brownii*  $\frac{5}{8}$  05. *Sal. reticulata*  $\frac{5}{8}$  05.

Area: Finl., Su. (Umeå, VLEUGEL), N. (Tromsø, ROSTRUP 86), D., Isl., Gr. Els.

*Didymosphaeria Dryadis* (FUCK.) BERL. & VOGL. Sacc. IX, pag. 733. Syn.: *Pleospora Dryadis* FUCK. (72), non *Pleospora Dryadis* (STARB.). Sacc. IX, pag. 892. Icon: OUDS. (85), tab. II, fig. 6. FUCK. (72), tab. I, fig. 4.

Asci crasse tunicatis 100—120  $\mu \times$  36—40  $\mu$ , sporidiis 28—32  $\mu \times$  12—16  $\mu$  strato hyalino obvolutis.

Epiphyllous on leaves of *Dryas integrifolia*  $\frac{3}{8}$  1905.

Area: Gr. (but not Nov. Seml. as mentioned by BERL. & VOGL., pag. 114, Sacc. IX, pag. 733 and Sacc. XII, pag. 201).

*Leptosphaeria caricinella* KARSTEN (72). Sacc. II, pag. 65. Icon: BERLESE, vol. I, tab. LVI.

Peritheciis 120—200  $\mu$  diam.; ascis ovato-oblongis, crassiusculis, breve stipitatis, paraphysatis, 52—72  $\mu \times$  20—24  $\mu$ ; sporidiis conglobatis,

curvulis, utrinque obtusis, fuligineo-olivaceis, 3-septatis, loculo subultimo crassiore,  $32-40\ \mu \times 5-6\ \mu$  (look tab I, fig. 1).

On leaves of *Carex misandra*.

Area: Spitsb., Gr. (SCHROET. 88).

*Leptosphaeria insignis* KARST. (72). Sacc. II, pag. 71. Icon: BERLESE, vol. I, tab. LXVIII, fig. 2.

Peritheciis  $200-260\ \mu$  diam.; ascis  $100\ \mu \times 30-45\ \mu$ ; sporidiis utrinque obtusatis, strato gelatinoso  $3\ \mu$  crasso obvolutis,  $36-38\ \mu \times 12-15\ \mu$ , 5-septatis, ad septa constrictis, fuscis (look fig. 12).

On dead leaves of *Dupontia Fisheri*  $\frac{6}{8}$  04.

Area: Spitsb.

*Pleospora arctagrostidis* OUDS. (85). Sacc. IX, pag. 879. Icon: OUDS. 85, tab. I, fig. 1, BERLESE, vol. II, tab. XXIII.

Ascis  $105\ \mu \times 40\ \mu$ ; sporidiis primo brunneis demum obscurioribus, atro-brunneis,  $35-42\ \mu \times 14-17\ \mu$ , 7-septatis, ad septa constrictis, sepimentis in longitudine 2-3.

On *Alopecurus alpinus*  $\frac{3}{8}$  04.

Area: Nov. Seml.

*Pleospora deflectens* KARST. (72). Sacc. II, pag. 266. Icon: BERLESE, vol. II, tab. XIII, fig. 1.

Ascis  $80-95\ \mu \times 15-16\ \mu$ ; sporidiis atro-fuscis, episporio crasso,  $19-29\ \mu \times 8-9\ \mu$ , 5 septatis, ad septa constrictis (look fig. 4).

On dead leaves of *Poa cenisia*  $\frac{5}{8}$  05.

Area: Su. (Gotland), Spitsb., Gr.

*Pleospora discors* (MONT.) CES. & DE NOT. Sacc. II, pag. 270. NIELSL. (76). Icon: BERLESE, vol. II, tab. XXIII, fig. 3.

Ascis  $140-180\ \mu \times 35-60\ \mu$  (praecipue  $165-172\ \mu \times 41-43\ \mu$ ); paraphysibus filiformibus, ascos superantibus,  $270\ \mu \times 3\ \mu$ ; sporidiis  $40-51\ \mu \times 14-19\ \mu$ , transversim 7-8 septatis, longitudinaliter 1-3 sept. (look tab. I, fig. 9).

On dead leaves of *Elymus mollis*  $\frac{6}{8}$  04. *Eriophorum Scheuchzeri*  $\frac{6}{8}$  04.

Area: Gr., besides on the European mountains f. inst. Helv., Tir., It. bor., Gall. and in Algeria.

*Pleospora herbarum* (PERS.) RABENH. Sacc. II, pag. 247. Icon: NIELSL. (76), tab. IV, fig. 14, BERLESE, vol. II, tab. XXVII etc.



Ascis 140—160  $\mu$   $\times$  40—48  $\mu$ , sporidiis melleis, 40—48  $\mu$   $\times$  17  $\mu$ , 7 septatis, non constrictis.

On dead stems of *Saxifraga hirculus*  $\frac{3}{8}$  05.

Area: common.

*Pleospora macrospora* SCHROET. (81). Sacc. II, pag. 263.

Peritheciis 280—310  $\mu$  diam.; sporidiis atrofusis, 40—47  $\mu$   $\times$  17—20  $\mu$ , transversim 3 septatis, longitudinaliter imperfecte 1 septatis (look tab. I, fig. 8).

*Hierochloa pauciflora*  $\frac{10}{8}$  04.

Area: Su. (Luleå), Gr.

*Pleospora media* NIESSL. 76, pag. 188. Sacc. II, pag. 244. Icon: NIESSL. (76), tab. IV, fig. 12, BERLESE, vol. II, tab. XV, fig. 1.

Ascis 80—88  $\mu$   $\times$  14—18  $\mu$ ; sporidiis 20—25  $\mu$   $\times$  8—11  $\mu$ .

On dead peduncles of *Papaver radicum* f. *albiflora*  $\frac{31}{7}$  1904.

Area: Germ., Austr., It., Gall. etc., Al.

*Pleospora pentamera* KARSTEN (72, pag. 99). Sacc. II, pag. 266. Icon: BERLESE, vol. II, tab. XLVI, fig. 3.

Ascis 140  $\mu$   $\times$  40—45  $\mu$ ; sporidiis 32—44  $\mu$   $\times$  14—16  $\mu$ , transverse 6—8 septatis, longitudinaliter 1 septatis.

*Dupontia Fisheri*  $\frac{10}{8}$  04.

Area: N. (Dovre), Spitsb., Fær., Isl., Gr., Els., Al.

*Pyrenophora chrysospora* (NIESSL.). Sacc. II, pag. 285 & IX, pag. 896. Icon: STARB. (90), tab. I, fig. 8. BERLESE, vol. II, tab. LVII, fig. 1.

Peritheciis 120—230  $\mu$  diam.; ascis 80—95—96—100—110—112—115—125  $\mu$   $\times$  21—28—30—31—32—40—42—45  $\mu$ ; sporidiis primo melleis, 1 septatis, valde constrictis, dein atrofusis 23—24—25—28—29—30—32—34—35—36—37—38—40  $\mu$   $\times$  12—13—14—15—16—17—18—24  $\mu$ , 7-septatis, septis semper rectis et parallele dispositis (look fig. 6).

On *Cerastium alpinum*  $\frac{3}{8}$  &  $\frac{10}{8}$  05, *Chrysanthemum integrifolium*  $\frac{2}{8}$  05, *Draba glacialis*  $\frac{31}{7}$  04, *Epilobium latifolium*  $\frac{5}{8}$  05, *Melandrium apetalum* f. *arctica*  $\frac{4}{8}$  05, *Oxyria digyna*  $\frac{31}{7}$  04, *Oxytropis arctobia*  $\frac{7}{7}$  04, *Oxyt. campestris* var. *melanocephala*  $\frac{7}{7}$  04, *Parya arctica*  $\frac{31}{7}$  04, *Potentilla rubricaulis*  $\frac{5}{8}$  05, *Pot. Vahlana*  $\frac{3}{8}$  05, *Saxifraga stellaris* f. *comosa*  $\frac{1}{8}$  04, *Silene acaulis*  $\frac{17}{7}$  04.

Area: common in all arctic and subarctic regions, vize Nov. Seml., Su., N. (Dovre), Spitsb., Isl., Gr., Al. as wel as in the Alps.

*Pyrenophora comata* (NIESSL.). Sacc. II, pag. 286. Icon: BERLESE, vol. II, tab. LXII, fig. 2.

Is distinguished from the above by 3 stronger cross-walls and with marked furrows at these; alternating with 4 thinner cross-walls without furrows.

On dead leaves of *Pedicularis capitata* and *Ped. lanata* July 04, *Ped. sudetica* var. *lanata*  $\frac{3}{8}$  04.

Area: N. (Tromsø and Dovre), Isl., Gr., Els., Al. besides It. bor.

*Linospora insularis* JOHANS. (84, pag. 171). Sacc. IX, pag. 849. Syn.: *Centocarpus insulare* (JOH.) BERL., vol. II, pag. 149. Icon: JOHANS. 84, tab. XXIX, fig. 13.

Asci  $120 \mu \times 8 \mu$ ; sporidiis  $80-90 \mu \times 2 \mu$ , 2 septatis.

On *Salix reticulata* (hosp. nov.)  $\frac{5}{8}$  05.

Area: Isl., Gr.

### *Gymnoasceae.*

*Gymnoascus Reesii* BARANETZKY. Sacc. VIII, pag. 823.

On excrements of ptarmigans  $\frac{17}{7}$  1904.

Area: Germ., Brit.

### *Hysteriaceae.*

*Lophodermium arundinaceum* (SCHRAD.) CHEV. Sacc. II, pag. 795. Icon: SCHRAD., tab. III, fig. 3.

On dead leaves of *Elymus mollis*. Framsnæs  $\frac{6}{8}$  04.

Area: Finl., Su., N., Spitsb., Fær., Isl., Gr., Els., etc. even at Tierra del Fuego (Bomm.).

*Lophodermium versicolor* (WAHLB.) SCHROET. (88). Syn.: *Hysterium versicolor* WAHLENB. (12, pag. 522), *Hysterium versicolor* SCHROET. (86). Icon: WAHLENBERG (12), tab. XXX, fig. 5 (habitus).

The description of this fungus is to be found by VLEUGEL (08), pag. 377, not in Sacc.

On dead leaves of *Salix arctica* var. *Brownii* (hosp. nov.) (look tab. I, fig. 10).

Area: Su. (Luleå, LIND (05), Umeå, VLEUGEL (08)), N. (Hammerfest, WAHLENBERG (12), Nordkap, SCHROET. (86)), Isl., Gr., Al. (Harr. wrongly »*Lophoderm. maculare* (FRIES) DE NOT.«), besides in Berner Oberland (REHM. (96)).

# Discomycetes.

*Naevia fuscella* (KARSTEN) LIND. Syn.: *Phacidium fuscillum* KARST. (85, pag. 160). Sacc. VIII, pag. 720. *Trochila fuscella* KARST. (71, pag. 248).

Ascis 80—100  $\mu$   $\times$  12—16  $\mu$ ; sporidiis 16—20  $\mu$   $\times$  6—8  $\mu$ , utrinque rotundatis. By examination of the rich material of this species at the museum in Copenhagen I have found, that in regard to colour, consistens and relation to its host it agrees much more with the genus *Naevia* FRIES (Sticteae) than with *Phacidium* FRIES (Phacidiaceae). It is formerly noticed on *Carex atrata*, hyperborea, leporina, scirpoidea, stans and vulgaris.

On *Carex aquatilis* var. *stans*.  $\frac{10}{8}$  1904.

Area: Finl., N. (Dovre), Su. (Jemtland, ROSTRUP (83)), Fær., Isl., Gr.

*Naevia ignobilis* (KARSTEN) REHM. (96, pag. 142). Syn.: *Phacidium ign.* KARST. (85, pag. 160). Sacc. VIII, pag. 720. *Trochila ign.* KARST. (71, pag. 248).

Ascis 52—60  $\mu$   $\times$  12—14  $\mu$ ; sporidiis 12—13  $\mu$   $\times$  3  $\mu$ .

On *Carex aquatilis* var. *stans*.  $\frac{3}{8}$ . 04.

Area: Finl., N. (Fløjfjeld, ROSTRUP (86) etc.), Su. (Snjærrack and Pollaure, SCHROET. 81), Isl., Gr., Els. besides Helv.

*Naevia pusilla* (LIB.) REHM. (96, pag. 143). Syn.: *Stictis pusilla* LIBERT, *Mollisia perpusilla* COOKE, *Trochila pusilla* SPEG. & ROUM, *Mollisia aberrans* REHM, *Stictis NISSLII* ROUM, *Trochila juncicola* ROSTRUP. Sacc. VIII, pag. 662 & VIII, pag. 732. Icon: REHM (96, pag. 118).

Ascomatibus sparsis, primitus immersis, clausis sphaeroideis, initio epidermide tectis, dein erumpentibus ore circulari sescernentibus, disco pallido fulvo-flavo,  $\frac{1}{8}$  mm. diam, concavo, margine pallidiore. Ascis 8 sporis, clavatis, sursum rotundatis, sessilibus, 40—52  $\mu$   $\times$  8,7—10  $\mu$ . Jod +. Paraphysibus apice clavatis usque 5  $\mu$  incrassatis, pallide flavis, ascos paulo superantibus. Sporidiis distichis, clavulatis, undique obtuse rotundatis, continuis, hyalinis 8—11  $\mu$   $\times$  3—4  $\mu$ , biguttulatis.

The description of *Trochila juncicola* by the late Mr. ROSTRUP (86, pag. 231) is very insufficient. I have examined numerous specimens, deposited here in the museum determined by him, they all agree with the description of *Naevia pusilla* by REHM (96, pag. 143) and with the specimens, determined by REHM and issued by JAAP (JAAP: Fungi selecti



exsiccati No. 106 a & b). This gives also the explanation of Mr. ROSTRUP's finding *Trochila juncicola* in many places, where other investigators did not find it, and on the other hand, Mr. ROSTRUP's never finding *Naevia pusilla*.

This species is for the first time found by Md. LIBERT on *Juncus conglomeratus* at Malmedy in Belgium and placed in her herbarium as *Stictis pusilla*, but she has never published that name. After her death her collection was distributed both by Thümen in *Mycotheca universalis* No. 1662 and by ROUMÈGUÈRE in *Fungi Gallici* No. 663 and described as well as *Trochila pusilla* (LIB.) by SPEGAZZINI and ROUMÈGUÈRE (80, pag. 20) as by COOKE (80, pag. 85) as *Mollisia perpusilla* (LIB.) COOKE. REHM has found it in Bavaria and distributed the same in his *Exsiccat: Ascomycetes* No. 608 and described it in *Hedwigia* 1882, pag. 67 as *Mollisia aberrans*. KRIEGER found it in Sachsen (*Fungi saxonici* No. 40) and JAAP in THÜRINGIA on *Juncus effusus* and in Mecklenburg on *Juncus balticus* besides on the island Romø; VESTERGREN found it also on *Juncus balticus* on Oesel (Russia) (*Micromycetes rariores select.* No. 221) and STARBÄCK (89, pag. 20) on *Juncus effusus* on Øland (Sweden). Warming (ROSTRUP 86) found it at Kaafjord in Finmark on *Juncus compressus*; it is further noticed from Norway (BLYTT 91 & ROSTR. Asc.) on *Juncus arcticus* and *trifidus* and *Luzula arctica*, *parviflora* and *pilosa*; from Iceland (ROSTRUP 03) on *Juncus balticus* and *filiformis* and *Luzula multiflora*; from Greenland (ROSTRUP 88) on *Juncus trifidus* and *triglumis* and *Luzula arctica*, *arcuata*, *confusa*, *multiflora* and *spicata*, and finally in Ellesmereland (ROSTRUP 06) on *Luzula nivalis*, and on Jan-Mayen (OSTENF. 97).

It will be seen, that this little fungus has a very great propagation and is found on many different host plants; it is easily distinguished by its wide spread, at first globular and immersed apothecia, which later break out through the epidermis, cutting in this a circular opening of the size of the discus, the cut-off cover is often attached to one side as a flap or gets loose and drops off. It is found at summer time on withered leaves and stems of the above mentioned Juncaceae.

*Juncus biglumis* (hosp. nov.)  $\frac{6}{8}$  04 and *Luzula nivalis*  $\frac{31}{7}$  04.

*Mollisia advena* KARSTEN (72). Sacc. VIII, pag. 352.

Asci 36—48(—60)  $\mu$   $\times$  16  $\mu$ .

On dead leaves and stems of *Eriophorum polystachyum* & *Scheuchzeri*  $\frac{6}{8}$  04,  $\frac{7}{8}$  05.

Area: Spitsb.

*Mollisia graminea* KARSTEN (71, pag. 199). Sacc. VIII, pag. 352.

Asci 40—50  $\mu$   $\times$  10  $\mu$  (immaturis); sporidiis 14  $\mu$   $\times$  2  $\mu$  ellipticis, hyalinis, 1 septatis.

On dead leaves of *Dupontia Fisheri*.

Area: Finl.

*Niptera Lychnidis* (FUCK.) LIND. Syn: *Micropeziza Lychnidis* FUCK. (74). Not in Sacc. Icon: OUDS (85), tab. II, fig. 10.

Asci ellipticis, utrinque attenuatis, breve stipitatis, tenue tunicatis, curvulis, 8-sporis, 60  $\mu$   $\times$  12  $\mu$ . Paraphysibus numerosis. Sporidiis ellipticis, falcatis, hyalinis, inaequaliter bipartitis, 18—22  $\mu$   $\times$  4—5  $\mu$ .

FUCKEL has found it on the same hostplant without stating the finding-place. It has not been found again during the following 35 years. The genus *Micropeziza* is in the meantime obliterated, and I must put it to the genus *Niptera*, to which it relates according to its general habitus and its 2 celled spores. Fuckel writes: »sporidiis continuis (seu septo obscuro?)« but on his figures the spores are plainly divided into two cells of unequal size, as I always have found them. It is very much related to *Niptera Agrostematis* (FUCK.) REHM.

On dead leaves of *Melandrium apetalum* f. *arctica*  $\frac{2}{8}$  05.

### *Fungi imperfecti.*

*Phoma complanata* (TODE) DESM. Sacc. III, pag. 126.

On dead stems of *Pedicularis sudetica* var. *lanata*. July 04.

Area: N. (Dovre), Fær., Isl., Gr., Am. bor., Al. etc.

*Phoma herbarum* WEST. Sacc. III, pag. 133.

*Matricaria inodora*  $\frac{1}{8}$  05.

Area: Isl., Gr. etc.

*Sphaeronema foliicolum* (FUCK) LIND. Syn.: *Ceratostoma foliicolum* FUCK. (74, pag. 94). Sacc. IX, pag. 483. Icon: FUCK. 74, tab. I, fig. 7.

FUCKEL has never found asci, and he delineates only perithecia and a single spore. I have also most frequently found the perithecia steril, but in few cases I have found spores, similar to *Phoma*-spores. According to its shape and occurrence I am inclined to think, it is the conidial stage of *Hypospila groenlandica*.

On dead leaves of *Salix arctica* var. *Brownii*.

*Diplodina arctica* n. sp.

Peritheciis sparsis, nigris, sphaericis, 150—200  $\mu$  diam., tectis, epidermidem minute pustulatim sublevantibus, vix erumpentibus, poro 35  $\mu$  diam. pertusis. Sporulis oblongis, utrinque rotundatis, 1 septatis, cylindricis vel constrictis, leniter curvulis, hyalinis, endoplasmate granuloso, 30—42  $\mu \times$  7—9  $\mu$  (look tab. I, figs. 13 & 16).

On dead leaves of *Alopecurus alpinus* f. *mutica* Aug. 05 and *Poa cenicia*  $\frac{3}{8}$  04.

*Rhabdospora cercosperma* (ROSTRUP). Sacc. X, pag. 391. Syn.: *Septoria cercosperma* ROSTRUP (83), *Septoria caudata* KARST. (84 b), *Rhabdospora caudata* (K.). Sacc. III, pag. 593. *Kellermannia Rumicis* FAUTR & LAMB. Sacc. XIV, pag. 964. Description and many figures by VESTERGREN (00).

It is a very curious and inexplicable circumstance, that this fungus, which is found on many different hostplants in the arctic countries, is not found in Denmark on other hosts than *Rumex*. According to the description it is identical with *Kellermannia Rumicis*, which is found on *Rumex crispus* in France.

On dead stems of *Chrysanthemum integrifolium*  $\frac{6}{8}$  04, *Matricaria inodora* var. *grandiflora*. Framnæs  $\frac{6}{8}$  04 and *Papaver radicum*  $\frac{6}{8}$  04.

Area: Finl., Su. (Umeå, VLEUGEL & Jämtland, ROSTRUP 83), N., Beeren Eiland, Fær., Gr., Els. besides D. and Gall.

*Rhabdospora Drabae* (FUCK.) BERL. & VOGL. Sacc. X, pag. 391. Syn.: *Rhoma Drabae* FUECKEL (72, pag. 94), *Septoria Drabae* ROSTRUP (88). Icon: FUECKEL (72, tab. I, fig. 9 and OUDS. 85, tab. III, fig. 7).

On dead stems of *Draba alpina*.

Area: N. (Dovre), Gr. (but not Nov. Seml. as Sacc. X, pag. 391 & XII, pag. 660 scribes).

*Rhabdospora groenlandica* LIND nom. nov. Syn.: *Septoria nebulosa* ROSTRUP (88). Sacc. X, pag. 385. Non *Rhabdospora nebulosa* (DESM.). Sacc. III, 589.

Sporulis 16—18  $\mu \times$  2—3  $\mu$ , hyalinis, continuis, curvatis, undique attenuatis.

On dead leaves of *Poa cenisia*  $\frac{7}{8}$  05.

Area: Gr., Els.



*Hendersonia Stefansonii* ROSTRUP (03, pag. 320). Sacc. XVIII, pag. 365.

Sporulis atrofuscis,  $20\ \mu \times 7\ \mu$ , 3-septatis.

*Carex rupestris*. Aug. 05.

Area: Isl. (but not Denmark as Sacc. XVIII notes).

*Marssonina obscura* (ROMELL) P. MAGNUS. Sacc. X, pag. 478.

Conidiis elongato-piriformibus, curvulis, protoplasmate granuloso fartis, hyalinis, bilocularibus, loculo inferioro minore quam superiore, basi contracto,  $25-28\ \mu \times 5-8\ \mu$  (look fig. 15).

On leaves of *Salix* sp. July 1904.

Area: D., Su., Finl.

List of Fungi from King Point<sup>1</sup> Lat. N. 69° 6' 4", Long. W. 137° 40' and from Herschell Island<sup>2</sup> Lat. N. 69° 35', Long. W. 138° 50'.

*Pyrenomycetes.*

*Erysiphe Polygoni* DE C. Salm., pag. 174 & icon., tab. 8 & 9.

On *Astragalus frigidus* var. *littoralis*. K. P. 27/8 06.

Area: Isl. etc.

*Mycosphaerella Capronii* (SACC.) LIND. Syn.: *Sphaerella salicicola* COOKE non FUCH. Sacc. I, pag. 487.

Peritheciis atro-nitidis, interdum subcaespitosis, hypophyllis; ascis 40—60  $\mu \times 8 \mu$ ; sporidiis 16—18  $\mu \times 4 \mu$ , 1-septatis, hyalinis. The brief description by Mr. COOKE does not permit us to decide, if this is really his species; but the present fungus is at all events identical with those, which Mr. ROSTRUP has related to this species.

On dead leaves of *Salix arctica*. K. P. 27/8 06. *Salix pulchra*. K. P. 4/7 06. *Salix Richardsonii*. K. P. 4/7 06.

Area: N. (Tromsø, ROSTRUP 86), Brit., Isl., Gr.

*Mychosphaerella pachyasca* (ROSTRUP) VGR.

*Aconitum delphinium*, *Anemona hirsutissima*, *parviflora* var. *grandiflora* and *Richardsonii*, *Arnica alpina*, *Astragalus alpinus*, *elegans* and *frigida* var. *littoralis*, *Cassiope tetragona*, *Cerastium maximum*, *Draba fladnizensis* et f. *tenuisiliqua*, *hirta* and *glacialis*, *Dryas octopetala* f. *hirsuta*, *Melandrium affine*, *Papaver radiculatum*, *Polemonium coeruleum* var. *villosum*, *Saxifraga hirculus* var. *propinqua* and *Taraxacum eurylepium*.

*Mycosphaerella recutita* (FRIES) JOHANS. (84). Sacc. I, pag. 527.

On *Festuca rubra* var. *arenaria*. K. P. 28/6 06.

Area: N. (Dovre), Su., Isl. besides Germ., Brit., Tir. etc.

<sup>1</sup> indicated by K. P.

<sup>2</sup> indicated by H. I.

*Mycosphaerella Tassiana* (DE NOT.) JOHANS.

*Trisetum spicatum*. K. P. July 06.

*Mycosphaerella Wichuriana* (SCHROET.) JOHANS.

*Carex rupestris*. K. P.  $10/7$ . H. I.  $13/7$  06. *Eriophorum vaginatum*.  
K. P.  $1/7$  06.

*Venturia chlorospora* (CES.) KARST.

Ascis  $76-84 \mu \times 8-10 \mu$ ; sporidiis  $14-15 \mu \times 5 \mu$ .

*Salix reticulata*. K. P.  $21/6$ .

*Leptosphaeria subconica* (C. & PECK.). Sacc. II, pag. 15.

On dead stems of some *Ericacé*. K. P. July 1906.

Area: Am. bor.

*Hypospila groenlandica* ROSTRUP (88). Sacc. IX, pag. 849. Icon:  
BERLESE, vol. I, tab. CXXVIII.

On dead leaves of *Salix*. K. P.  $6/7$  06.

Area: Su. (Umeå, VLEUGEL), Gr.

*Pleospora Anthyllidis* AWD. Sacc. II, pag. 252. Icon: BERLESE,  
vol. II, tab. XLI and NIESSL. (76), tab. IV, fig. 13.

Ascis  $120 \mu \times 48 \mu$ ; sporulis atrofusis  $40-48 \mu \times 18-20 \mu$ ,  
14-septatis.

*Lupinus nootkanensis* var. *Kjellmanii*. K. P.  $24/6$  06.

Area: Germ., Tir., Helv., Hisp.

*Pleospora deflectens* KARST. (72, pag. 99), Sacc. II, pag. 299.

Ascis cylindricis  $100-115 \mu \times 17-21 \mu$ ; sporidiis e rhomboideo  
fusoides, melleis,  $28-35 \mu \times 11-12 \mu$ , 5-septatis, loculis 2-4 mediis  
in longitudine 1-septatis.

*Poa glauca*. K. P. July 1906.

Area; Spitsb., Gr.

*Pleospora Drabae* SCHROET. (81). Sacc. II, pag. 253.

Ascis  $60-72 \mu \times 13-16 \mu$ ; sporidiis fusco-flavidis  $18 \mu \times 6-8 \mu$ ,  
3-5-septatis (look fig. 3).

*Draba nivalis*. K. P.  $16/6$  06.

Area: N. (Dovre), Su. (Lapland, SCHROET. 81), Isl., Gr., Els.

*Pleospora oblongata* NIESSL. (76, pag. 177). Sacc. II, pag. 245  
& IX, pag. 892. Icon: NIESSL. 76, tab. IV, fig. 3 and BERLESE, vol. II,  
tab. XI, fig. 1.



Ascis  $65\ \mu \times 12\ \mu$ ; sporulis piriformibus  $21-25\ \mu \times 8-9\ \mu$ , 4—5—6 transverse septatis, loculo uno in longitudine diviso, fuscidulis.

*Oxytropis nigrescens*.

Area: Austr., Gall., Germ., It.

*Pleospora pentamera* KARST.

Festuca ovina var. brevifolia. K. P.  $7/7$  06.

*Pleospora vulgaris* NIESSL. (76, pag. 187). Sacc. II, pag. 243. Icon: NIESSL. 76, tab. IV, fig. 11.

Ascis  $76-90\ \mu \times 16-18\ \mu$ ; sporidiis  $18-24\ \mu \times 7-10\ \mu$ , transverse 3—6-septatis, in longitudine 1-septatis, medio constrictis.

Alsine verna f. hirta. K. P. July 06.

Area: Isl., Gr. etc.

*Pyrenophora comata* (NIESSL.). Sacc.

Peritheciis  $300\ \mu$  diam.; ascis  $100-108-112-128-140\ \mu \times 24-28-30-36\ \mu$ ; paraphysibus ascos superantibus, numerosis, simplicibus, filiformibus, hyalinis; sporulis  $28-30-32-33-34-35-37-40-44-48-50-52\ \mu \times 13-14-15-16-17-18-20\ \mu$ , transversim 7(—8)—septatis, in longitudine 3-septatis.

On dead leaves and stems of *Aconitum delphinifolium* H. I.  $19/7$  06, *Anemona Drummondii* and *hirsutissima* K. P.  $16/6$  06, *Astragalus frigidus* var. *littoralis* H. I.  $13/7$  06, *Cerastium maximum* K. P.  $10/7$  06, *Hedysarum Mackenzii* K. I.  $17/7$  06, *Oxytropis campestris* var. *melanocephala*  $29/6$  06, *Ox. Roaldii* H. I.  $13/7$  and *Parya nudicaulis* K. P.  $4/7$  06.

*Pyrenophora helvetica* (NIESSL.). Sacc. II, pag. 287. Icon: NIESSL. 76, tab. IV, fig. 18, BERLESE, vol. II, tab. LVIII, fig. 2.

Ascis  $68-80\ \mu \times 20-36\ \mu$ ; sporidiis  $21-25\ \mu \times 7-9\ \mu$ .

*Androsace chamaejasme* var. *arctica* (hosp. nov.). H. I.  $13/7$  06.

Area: Helv., Tir.

*Pyrenophora paucitricha* (FUCK.) BERL. & VOGL. Sacc. IX, pag. 897. Icon: FUCK. 72, tab. I, fig. 3.

Peritheciis  $150\ \mu$  diam.; setis atrofusis, apice obtusis, septatis, usque  $8\ \mu$  crassis; ascis cylindricis  $90-120\ \mu \times 25-26\ \mu$ , sporulis  $24-30\ \mu \times 13-17\ \mu$ , transversim 6—7 septatis, in longitudine 1 septatis, atrofusis, demum subopacis, medio constrictis.

On dead leaves of *Salix reticulata*. K. P.  $21/6$ .

Area: N. (Dovre, BLYTT), Gr.

*Pyrenophora phaeospora* (DUBY). Sacc. II, pag. 281. Icon: BERLESE, vol. II, tab. LXI.

Sporulis atrofusis  $32-33 \mu \times 14-15 \mu$ .

*Alsine arctica* f. *scapigera*. K. P. July 06.

Area: Tir., Helv.

### *Dothideaceae.*

*Dothidelia betulina* (FRIES). Sacc. II, pag. 628. Icon: WT., pag. 894.

*Betula glandulosa*. K. P.  $10/7$  06.

Area: Sib., Finl., Su., N., Spitsb. (H. RESVOLL-DIESET, ex expl. in Herb. Copenhagen), Isl., Gr., Al. (KOTZEBUE Sound. ROTHROCK), etc.

### *Hysteriaceae.*

*Lophodermium versicolor* (WAHL.) SCHROET.

Ascis clavatis  $56-80 \mu \times 6 \mu$ ; paraphysibus filiformibus ascos superantibus, sursum recurvatis; sporidiis filiformibus (look tab. I, fig. 10).

### *Discomycetes.*

*Agyrium rufum* (PERS.) FRIES. Sacc. VIII, pag. 634. Icon: REHM, pag. 447.

Asc.  $44 \mu \times 8 \mu$ ; spor. ovatis  $9-14 \mu \times 6-7 \mu$ .

On old wood of *Betula verrucosa*. K. P.  $8/7$  06.

Area: Finl. (»per totam Fenniam et Lapponiam satis frequens«, KARST. 85), N. (Saltdalen, SOMMF. 1826, p. 309), Isl., Am. bor., etc.

*Mollisia atrata* (PERS.) KARST. Syn.: *Pyrenopeziza atrata* FOCK. Sacc. VIII, pag. 354.

Ascis cylindricis seu clavatis  $34-36 \mu \times 6-7 \mu$ ; paraphysibus filiformibus,  $1 \mu$  crassis.

On dead stems of *Potentilla Vahlia* (hosp. nov.). K. P.  $23/8$  06.

Area: Finl., Su., N. (Tromsø), Isl., Gr., besides Tir. etc.

### *Fungi imperfecti.*

*Phoma Astragali alpini* OUDS. (85, pag. 160). Sacc. X, pag. 170. Icon: OUDS. 85, tab. I, fig. 17.

On dead stems of *Astragalus alpinus*. K. P.  $18/7$  06.

Area: Nov. Seml., Su. (Luleå, VGR. 02 wrongly »Phoma Astragali OUDS.«).

*Phoma herbarum* WEST. Sacc. III, pag. 133.

On dead stems of *Lupinus nootkanensis* var. *Kjellmanii*. K. P.  $\frac{24}{8}$  06  
and *Thlaspi alpestre* f. *purpurascens*. H. I.  $\frac{18}{7}$  06.

Area: Sib., Isl., Gr., Am. bor. etc.

*Phoma Oudemansii* BERL. & VOGL. Sacc. X, pag. 174. Syn.:  
*Phoma Polemonii* OUDS. (16) non COOKE.

On dead leaves of *Polemonium coeruleum* var. *villosum*. H. I.  $\frac{17}{7}$  06.

Area: Nov. Seml.

*Rhabdospora Drabae* (FUCK.) BERL. & VOGL. Syn.: *Septoria*  
*nivalis* ROSTRUP 88.

Peritheciis numerosis, sparsis, in foliis emortuis, erumpentibus, nigrescentibus, hypophyllis, c.  $80\ \mu$  diam.; sporulis elongato-ellipticis, utrinque attenuatis seu clavulatis, semilunaris, hyalinis, intus granulosis, contiguis,  $18-26\ \mu \times 3-4.5\ \mu$ .

On dead leaves of *Erigeron grandiflora*, *Papaver radicum* (hosp. nov.) and *Polemonium boreale*. H. I.  $\frac{13}{7}$  06.

*Dothiorella latitans* (FRIES). Sacc. III, pag. 241. Syn.: *Phyllachora latitans* (FRIES). Sacc. II, pag. 610.

On dead leaves of *Vaccinium Vitis idaea*. K. P.  $\frac{16}{6}$  06.

Area: Finl., Su., D., Gr.

*Gloeosporium Roaldii* n. sp.

Acervulis numerosis, sparsis, in vasta macula arida foliorum vel in foliis emortuis, erumpentibus, nigrescentibus, hypophyllis, c.  $80\ \mu$  diam.

Conidiis elongato-ellipticis, utrinque attenuatis seu clavulatis, curvatis, hyalinis, intus granulosis,  $20-26\ \mu \times 3.5-5\ \mu$ .

Hab. in foliis *Erigerontis grandiflori* et *Polemonii borealis*. H. I.  $\frac{13}{7}$  &  $\frac{14}{7}$  1906 (look tab. I, fig. 14).

*Cladosporium herbarum* (PERS.) LINK. Sacc. IV, pag. 350.

*Alsine verna* f. *hirta*. K. P. Juli 1906. *Hesperis Pallasii*. K. P.  $\frac{12}{6}$  06.  
*Thlaspi alpestre* f. *purpurascens*. K. P.  $\frac{20}{6}$  06.

*Coniothecium* sp.

Is generally found on leaves of all species of *Potentilla*. It can hardly be referred to any of the described species (look fig. 5).



### Abbreviations.

Al.	Alaska	Gr.	Greenland
Alp.	The Alps	Helv.	Switzerland
Am. bor.	Arctic America	Hisp.	Spain
Austr.	Austria	Isl.	Iceland
Brit.	Great Britain	It.	Italy
D.	Denmark	N.	Norway
Els.	Ellesmereland	Nov. Seml.	Nova Zembla
Finl.	Finland	Sib.	Arctic Siberia
Gall.	France	Spitsb.	Spitzbergen
Fær.	The Færøes	Su.	Sweden
Germ.	Germany	Tir.	Tyrol.

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### Explanation of figures.

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- Fig. 1. 1 ascus of *Leptosphaeria caricinella* KARST. on *Carex misandra*.  
Fig. 2. 2 asci of *Mycosphaerella Tassiana* (DE NOT.) JOHANS. on *Poa cenisia*.  
Fig. 3. 1 ascus of *Pleospora Drabae* SCHROET. on *Draba nivalis*.  
Fig. 4. 1 ascus of *Pleospora deflectens* KARST. on *Poa cenisia*.  
Fig. 5. Conidia of some undeterminable *Coniothecium* on *Potentilla emarginata*.  
Fig. 6. 1 ascus of *Pyrenophora chrysospora* (NIESSL.) SACC. on *Oxytropis campestris*.  
Fig. 7. 2 asci of *Didymella hyperborea* (KARST.) SACC. on *Cassiope tetragona*.  
Fig. 8. 1 ascus of *Pleospora macrospora* SCHROETER on *Hierochloa pauciflora*.  
Fig. 9. 1 ascus of *Pleospora discors* (MONT.) CES. & NOT. on *Elymus mollis*.  
Fig. 10. 4 asci of *Lophodermium versicolor* (WAHLB.) SCHROET. on *Salix arctica*.  
Fig. 11. A trug of *Cassiope tetragona* with peritheciis of *Didymella hyperborea* (K.) SACC.  
Fig. 12. 2 sporidia of *Leptosphaeria insignis* KARST. on *Dupontia Fisheri*.  
Fig. 13. 5 sporidia of *Diplodina arctica* n. sp. on *Alopecurus alpinus*.  
Fig. 14. 10 conidia of *Gloeosporium Roaldii* n. sp. on *Polemonium boreale*.  
Fig. 15. 12 conidia of *Marssonina obscura* (ROMELL) P. MAGN. on *Salix arctica*.  
Fig. 16. 5 sporidia of *Diplodina arctica* n. sp. on *Poa cenisia*.

The figures are drawn by Mr. OVE ROSTRUP and all magnified 540  $\times$  with exception of fig. 11.

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